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EXAMINER	
TRAN, KHANH C	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/090,927	OKSALA ET AL.	
	Examiner	Art Unit	
	Khanh Tran	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11-14,17-19 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-8,11-14,17,19 and 21-25* is/are rejected.

7)☒ Claim(s) *4 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on 05/15/2006 has been entered. Claims 1-8, 11-14, 17-19 and 21-25 are pending in this Office action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-13, 18-19 and 21-24 have been considered but are moot in view of the new ground(s) of rejection.

3. The objection of claims 12-13 and 17 has been withdrawn after Applicants amended claims to correct the informalities.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 5-6, 11-14, 17, 21-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecen (previously cited) U.S. Patent 6,603,825 B1 in view of Dam et al. U.S. Patent 6,496,551 B1.

Regarding claim 1, Pecen is directed to a receiver automatic gain control including a variable gain receiver having a control input and responsive to a gain control signal for adjusting the output level of the receiver. In column 5, lines 25-40, the GPRS data transfer characteristics for the GSM system is provided by packet switching. Instead of a dedicated time slot, each transfer of data from the local transceiver to the remote transceiver is accomplished *using packets* having a setup sequence, data, and a tear down sequence, as represented in FIG. 5. In column 8, lines 20-25, Pecen invention provides significant improvement in the systems, where gain control for packet transmissions is particularly challenging. By definition, a packet is equivalent to a frame.

In column 8, lines 25-50, Pecen teaches a method for automatic gain control comprising:

Measuring a traffic channel (TCH) (e.g. packet data channel (PDCH)) signal level and broadcast control channel (BCCH) carrier signal level to determine a BCCH carrier to interference ratio and a TCH carrier to interference ratio;

Adjusting a receiver gain of the receiver that receives information on a TCH, in response to the BCCH carrier signal level, and the BCCH carrier to interference ratio reaching a first predetermined value and said TCH carrier to interference ratio reaching a second determined value. The second determined value corresponds to the claimed predetermined transmission power. The step, as taught by Pecen, of "adjusting a receiver gain of the receiver that receives

information on a TCH, in response to the BCCH carrier signal level" corresponds to the claimed "using a predetermined way of controlling the transmission power".

As recited above, the BCCH carrier to interference ratio corresponds to the claimed reference level, wherein the BCCH carrier to interference ratio is determined by signal quality measurement.

The step of "adjusting a receiver gain of the receiver that receives information on a TCH, in response to the BCCH carrier signal level" corresponds to the claimed step of "the reference level is corrected on the basis of the signal strength measured during reception. The TCH corresponds to the claimed "logical packet data traffic channel".

Pecen does not explicitly teach the step of correcting the signal gain on the basis of the determined reference level at predetermined intervals.

Dam et al. invention to make the reception of information transmitted as repeated bursts in a radio communications system faster and more reliable. In column 1 line 53 via column 2 line 32 and in column 5 lines 25-40, Dam et al. discusses according to the Global Packet Radio Services (GPRS) standard in GSM, the information transmitted on the BCCH and CCCH is organized in messages each of which is mapped onto such a block of four BCCH or CCCH frames, respectively. Some of these messages, in particular on the BCCH are repeated with identical contents at predetermined intervals. Since according to GPRS standard in GSM, the BCCH is repeated with identical contents at predetermined intervals as discussed in Dam et al. invention, one of ordinary skill

in the art at the time the invention was made would have recognized that Pecan receiver correcting the receiver gain on the basis of the determined reference level (see also column 4 lines 35-50, pecan invention) at predetermined intervals.

Regarding claim 5, in column 6 lines 60-67, the GSM GPRS specification requires the radiotelephones 104 404 405 as shown in figure 4 take signal measurements repeatedly and communicate this information to a base station. Hence, the act of "taking signal measurements repeatedly" corresponds to the claimed "selecting one or more frames immediately preceding the received radio block".

Regarding claim 6, claim 6 is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 11, as recited in claim 1, according to the Global Packet Radio Services (GPRS) standard in GSM, the information transmitted on the BCCH and CCCH is organized in messages each of which is mapped onto such a block of four BCCH or CCCH frames, respectively. Some of these messages, in particular on the BCCH are repeated with identical contents at predetermined intervals.

Regarding claim 12, in column 3 lines 45-60, Pecen teaches that the system automatic gain control operates by the local transceiver 102 first determining where to set the transmitter 132 power level for the packet data channel (PDCH) relative to the

broadcast carrier channel (BCCH). The PDCH channel includes logical channels, e.g. Packet Common Control Channel (PCCCH).

Regarding claim 13, as recited in claim 12, Pecen teaches that the system automatic gain control operates by the local transceiver 102 first determining where to set the transmitter 132 power level for the packet data channel (PDCH) relative to the broadcast carrier channel (BCCH). The decision is made in processor 130 (see figure 2) based upon a signal quality measurement received from the remote station 104 and the received carrier power BCCH carrier reported by the remote transceiver 104 back to the local transceiver 102 (see figure 4).

Regarding claim 14, claim 14 is rejected on the same ground as for claim 1 because of similar scope.

Regarding claim 17, Pecen teachings apply to GPRS network.

Regarding claim 21, claim 21 is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 22, claim 22 is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 25, claim 25 is rejected on the same ground as for claim 1 because of similar scope.

5. Claims 2-3, 7-8, 19 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecen U.S. Patent 6,603,825 B1 (previously cited).

Regarding claim 2, Pecen does not explicitly teach the reference level is corrected by calculating its running average with respect to time as claimed.

However, in column 6, lines 60-67, Pecen discusses the GSM GPRS specification requires that the radiotelephones 104 404 405 as shown in figure 4 take signal measurements repeatedly and communicate this information to a base station. As common knowledge of one of ordinary skill in the art at the time of the invention, because averaging signal measurements is more accurate representation of the received signal over instantaneous measurements, in light of that, it would have been obvious for one of ordinary skill in the art at the time of the invention that Pecen teachings can be modified such that the BCCH carrier signal level is adjusted based on the running average with respect to time as claimed by Applicants.

Regarding claim 3, Pecen teachings apply to the General Packet Radio Service (GPRS) in which data packets with variable length are transmitted. Referring to figure 3, the receiver includes a filter 310. Also, as recited in claim 2, the GSM GPRS specification requires that the radiotelephones 104 404 405 as shown in figure 4 take

signal measurements repeatedly and communicate this information to a base station. In light of the aforementioned teachings, because the filter 310 filters data packets with variable length to eliminate signals outside of the desired received signal frequency band, one of ordinary skill in the art at the time of the invention would have been motivated to implement filter 310 with a varying length as claimed in the applicant claim.

Regarding claim 7, claim 7 is rejected on the same ground as for claim 2 because of similar scope. Furthermore, the average of the received signal of several packets is un-weighted and the BCCH carrier signal level is adjusted based on the running average.

Regarding claim 8, Pecen does not teach the signal strength is determined by using samples measured from the signal.

Referring to figure 3, in column 3 lines 25-35, the controller 114 can be implemented using a digital signal processor (DSP). Because the controller 114 can be a DSP, one of ordinary skill in the art would have been motivated to convert the received signal into digital samples and the signal quality measurement is determined by using samples measured from the received signal.

Regarding claim 19, claim 19 is rejected on the same ground as for claim 7 because of similar scope.

Regarding claim 23, claim 23 is rejected on the same ground as for claim 7 because of similar scope.

Regarding claim 24, claim 24 is rejected on the same ground as for claim 7 because of similar scope.

Allowable Subject Matter

6. Claims 4 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT Khanh Cong Tran 08/01/2006

Primary Examiner KHANH TRAN